



Appn. Number 10/748,858

(Klingler) GAU 3683

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### **Claim Amendments**

Claim 1 (canceled)

Claim 2 (canceled)

Claim 3 (canceled)

Claim 4 (previously amended): The mechanism of claim 6 wherein said pressure sensitive arm inhibition means comprises a force isolation plate pivotally mounted on said axle at a point on the opposite side of said arm relative to said locking surface; said force isolation plate being able to rotate around said axle independent from any rotation of said axle; a hinge mounted on said force isolation plate supporting a lever; said lever being pivotally mounted on said hinge; said hinge acting as a fulcrum for said lever; a lower portion of said lever, below said hinge, being biased by a spring such that in a resting mode an upper portion of said lever, above said hinge, extends over said arm and through the path of rotation of said arm; said safe auto-locking belay override mechanism responding differently to each of three pressure levels exerted on said lower portion of said lever as follows:

- a) low or no pressure causing said lever to slip free from a belayer's hands in said event in which sufficient force is exerted on said auto-locking belay device by said rope so as to cause said locking surface to begin to rotate along with said axle; rotation of said axle causing said arm to rotate, rotation of said arm causing said arm to contact said upper portion of said lever thereby causing rotation of said lever along with said force isolation plate, rotation of said lever causing said lever to slip free from said belayer's hands thus allowing said locking surface to continue to rotate and lock said rope;
- b) intermediate pressure being insufficient to further compress said spring but being sufficient to prevent said lever from slipping free from said belayer's hands in said event in which sufficient force is exerted on said auto-locking belay device by said rope so as to

cause said locking surface to begin to rotate along with said axle; rotation of said axle causing said arm to rotate until said arm contacts said upper portion of said lever; said lever blocking further rotation of said arm, thereby blocking further rotation of said axle, thereby blocking further rotation of said locking surface;

c) high pressure being sufficient to further compress said spring thus causing said lever to rotate with respect to said hinge, thus causing said upper portion of said lever to move out of said path of rotation of said arm, thus allowing said arm to rotate unimpeded, thus allowing said axle to rotate unimpeded in said event in which sufficient force is exerted on said auto-locking belay device by said rope so as to cause said locking surface to begin to rotate along with said axle, thus allowing said locking surface to continue to rotate and lock said rope.

Claim 5 (previously amended): The mechanism of claim 7 wherein said locking surface comprises a portion of a surface of a cam and said pressure sensitive arm engagement means comprises a key affixed to said axle, a key slot within a side of said cam, a spring, and said arm attached to said axle; said key able to fit within said key slot; said pressure sensitive arm engagement means being engaged when said key is within said key slot thus causing said axle to rotate with said cam whenever said cam rotates, thus causing said arm to rotate when said locking surface rotates; said pressure sensitive arm engagement means being disengaged when said key is not within said key slot thus allowing said cam to rotate around said axle independent from any rotation of said axle, thus allowing said locking surface to rotate independent from any movement of said arm; said spring positioned and partially compressed between a surface of said auto-locking belay device and said arm; a force exerted by said spring thus causing said pressure sensitive arm engagement means to be engaged when no external pressure is exerted on said arm; said pressure sensitive arm engagement means responding differently to each of three pressure levels exerted on said arm as follows:

a) low or no pressure allowing said pressure sensitive arm engagement means to remain engaged, thus ensuring that said cam and said axle rotate together, thus ensuring that

rotation of said cam causes said arm to rotate; said low or no pressure being insufficient to restrain said arm in said event in which sufficient force is exerted on said auto-locking belay device by said rope so as to cause said locking surface to begin to rotate along with said axle; said arm thus slipping free from said belayer's hands, said cam with said locking surface thus continuing to rotate and lock said rope;

b) intermediate pressure being insufficient to further compress said spring but being sufficient to prevent rotation of said arm in an event in which sufficient force would be exerted on said auto-locking belay device by said rope so as to cause said cam with said locking surface to rotate along with said axle were said cam with said locking surface not restrained from doing so by said intermediate pressure on said arm; said pressure sensitive arm engagement means remaining engaged being that said intermediate pressure is not sufficient to further compress said spring;

c) high pressure being sufficient to further compress said spring thus causing said pressure sensitive arm engagement means to become disengaged, thus allowing said cam to rotate independent from said axle thus allowing said cam with said locking surface to continue to rotate and lock said rope in said event in which sufficient force is exerted on said auto-locking belay device by said rope so as to cause said locking surface to begin to rotate along with said axle.

Claim 6 (previously added): A safe auto-locking belay override mechanism for the sport of rock climbing; said safe auto-locking belay override mechanism for use with an auto-locking belay device containing a locking surface which rotates on an axle to pinch a rope against a fixed surface, thereby preventing further movement of said rope, in an event in which sufficient force is exerted on said auto-locking belay device by said rope such as in the event of a fall by a climber; said safe auto-locking belay override mechanism comprising an arm attached to said locking surface either directly or by way of said axle, said arm thus rotating with said locking surface as said locking surface rotates; said safe auto-locking belay override mechanism further comprising a pressure sensitive arm inhibition means; said pressure sensitive arm inhibition means inhibiting

movement of said arm only when a relatively intermediate level of pressure is exerted on said pressure sensitive arm inhibition means; said pressure sensitive arm inhibition means being unable to inhibit movement of said arm when either a relatively high or relatively low level of pressure is exerted on said pressure sensitive arm inhibition means; relatively intermediate pressure exerted on said pressure sensitive arm inhibition means being sufficient to inhibit movement of said arm, thus restraining movement of said locking surface, thus overriding the rope locking function of said auto-locking belay device; relatively high or relatively low pressure exerted on said pressure sensitive arm inhibition means having no inhibiting effect on the movement of said arm, thus allowing said locking surface to rotate on said axle to pinch said rope in said event in which sufficient force is exerted on said auto-locking belay device by said rope; said safe auto-locking belay override mechanism thus providing safety by allowing said locking surface to lock said rope in the otherwise potentially dangerous situation in which a belayer panics, thus gripping said pressure sensitive arm inhibition means with greater force, when a climber falls after said belayer has blocked rotation of said locking surface by gripping said pressure sensitive arm inhibition means with intermediate force.

Claim 7 (previously added): A safe auto-locking belay override mechanism for the sport of rock climbing; said safe auto-locking belay override mechanism for use with an auto-locking belay device containing a locking surface which rotates on an axle to pinch a rope against a fixed surface, thereby preventing further movement of said rope, in an event in which sufficient force is exerted on said auto-locking belay device by said rope such as in the event of a fall by a climber; said safe auto-locking belay override mechanism comprising an arm normally attached to said locking surface either directly or by way of said axle, said arm thus normally rotating with said locking surface as said locking surface rotates; said safe auto-locking belay override mechanism further comprising a pressure sensitive arm engagement means; said pressure sensitive arm engagement means causing said arm to be engaged with said locking surface only when a pressure exerted on said arm is below a specific threshold level; said pressure sensitive

arm engagement means causing said arm to be disengaged from said locking surface when a pressure above said threshold level is exerted on said arm; relatively low pressure, below said threshold level, exerted on said arm allowing said auto-locking belay device to slip from a belayer's hands in an event in which sufficient rope forces are exerted on said auto-locking belay device, such as during the fall of a climber, thus allowing said arm to rotate along with said locking surface, thus locking said rope; relatively intermediate pressure, below said threshold level, exerted on said arm being sufficient to restrain movement of said arm, thus restraining movement of said locking surface, thus overriding the rope locking function of said auto-locking belay device; relatively high pressure, above said threshold level, exerted on said arm causing said arm to be disengaged from said locking surface, thus having no influence on the movement of said locking surface, thus allowing said locking surface to rotate on said axle to pinch said rope in said event in which sufficient force is exerted on said auto-locking belay device by said rope.